



The Bioinformatics Lab



Basic Web Applications

4.07.2011



Outline

- SQL and MySQL test
- Presentation of results from last week:
Databases and MySQL

by Evi Berchtold
- Short introduction to Web Applications
- Starting the programming challenge

Web Applications

- **Web applications** are software tools that are accessed over a network such Internet or intranet
- Web applications use a web browser as a client
- Common web applications include webmail, online auctions, wikis and many other functions
- **Web services** are typically application programming interfaces (APIs) or web APIs that are accessed via Hypertext Transfer Protocol and executed on a remote system hosting the requested services


Web applications in a Bioinformatics Lab

Wiki

- a website that allows the easy creation and editing of any number of interlinked web pages via a web browser



CMS: Content Management System – WCMS: Web CMS

- software, implemented as a Web application, for creating and managing content such as HTML
- to manage and control a large, dynamic collection of Web material
- content creation, content control, editing, and essential Web maintenance functions
- TYPO3 

Webmail

- an e-mail service intended to be primarily accessed via a web browser, as opposed to through a desktop e-mail client



Bug Tracking system

- a software application that is designed to help quality assurance and programmers keep track of reported software bugs in their work



Web applications in a Bioinformatics Lab

Database Web Admin

- Interface for a Database Management System (DBMS)



LDAP Web Admin

- web-based LDAP administration tool for creating and editing LDAP entries in any LDAP server



Web and User Statistic

- applications that generate web pages of analysis, from access and usage logs



Computer and Network Monitoring

- watches hosts and services, alerting users when things go wrong and again when they get better



Web applications in a Bioinformatics Lab

Web – Calendar (+ web interface)

- a computer file format which allows internet users to send meeting requests and tasks to other internet users
- different protocols exist



FTP Server

- standard network protocol used to copy a file from one host to another over a TCP/IP-based network, such as the Internet..

Forum

- or message board, is an online discussion site.

Chat room

- direct one-on-one or text-based group chat




Today's Programming Challenge

- Install, configure and connect all these services ;-)


MediaWiki



- Free web-based wiki software application
- Developed by Markus Manske  in 2002 for Wikipedia
- Written in the PHP programming language and uses a backend database (MySQL)
- The software is highly customizable, with > 700 configuration settings and > 1,600 extensions
- <http://www.mediawiki.org>

Typo 3



- Free and open source Content Management System
- Developed in 1997 by Kasper Skårhøj 
- More than 5000 pluggable extensions available for download at <http://typo3.org/extensions/>
- Has a web frontend, which presents a TYPO3 based website to its users, and a web based backend, used by authors and site administrators to manage content for the website
- Uses PHP and a relational database (MySQL)
- Uses a special configuration language called TypoScript
 - TemplaVoila is an alternative template engine extension for TYPO3

Today's Programming Challenge

- Install a wiki engine (e.g. MediaWiki)
- Install the CMS of your choice (e.g. Typo3)
- Connect the user management of the CMS with your LDAP
- Create a simple web page with your CMS for the practical

Please send Laszlo and Tanya (goldberg@rostlab.org) screenshots, including the URL of the browser, of

- one page in your wiki
- the front- and backend from your CMS and
- 2 pictures from different subpages in your CMS.

See  Hints and Tips in the oWiki